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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,250	12/05/2006	Bernd Pfannschmidt	PFANNSCHMIDT-4	1923

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HENRY M FEIEREISEN, LLC  
HENRY M FEIEREISEN  
708 THIRD AVENUE  
SUITE 1501  
NEW YORK, NY 10017

EXAMINER
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MOK, ALEX W

ART UNIT	PAPER NUMBER
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2834

NOTIFICATION DATE	DELIVERY MODE
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09/03/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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<b>Office Action Summary</b>	<b>Application No.</b> 10/595,250	<b>Applicant(s)</b> PFANNSCHMIDT, BERND	
	<b>Examiner</b> ALEX W. MOK	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,4-13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,4-13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Amendment*

1. Acknowledgement is made of Amendment filed May 15, 2009.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4, 5, 7-9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes (German Patent Document No.: DE 10122425 A1) in view of Muramoto et al. (Japanese Patent Document No.: JP 11255118 A) and Mizuyama et al. (US Patent No.: 4383191).

For claim 4, Hannes discloses a drive comprising a stator (reference numeral 31, figure 3); a rotor (reference numeral 32) interacting with the stator and coupled mechanically with a wheel set shaft (reference numeral 322) of the wheel set, and a cooling device (see figure 3) constructed to cool the rotor and including a fan (reference numeral 34) for drawing in air through an air inlet (reference numeral 319) and conducting the air through a cooling channel (reference numeral 37) inside the rotor. Hannes does not specifically disclose the wheel set, nor the barrier provided in the rotor.

Muramoto et al. disclose wheels, i.e. wheel set, attached to the shaft (reference numeral 28, figure 1). Mizuyama et al. disclose a cover (reference numeral 12), i.e. a barrier for the rotor (see figures 4, 8-11).

It would have been obvious to have this configuration since providing wheels to the rotor of a motor is a well known skill in the art as exhibited by Muramoto et al., and the cover as taught by Mizuyama et al. can be included in the invention by a person of ordinary skill for the purpose of protecting against foreign matter when air is drawn in.

For claim 2, Hannes discloses the invention including the stator and the rotor (reference numerals 31, 32, figure 3), but does not specifically disclose the wheel set having two wheels mounted to the wheel set shaft, and the wheel set shaft being completely enveloped in an area between the wheels by the electric machine. Muramoto et al. disclose this configuration (reference numeral 28, figure 1), and it would have been obvious to include this for the purpose of proper operation of the motor and also providing protection for the shaft.

For claim 5, Hannes discloses the rotor having at least one rotor hub which is coupled mechanically to the wheel set shaft (see numeral 318 in figure 3), and Hannes also discloses the rotor having a web since the channel (reference numeral 37) is formed in the rotor, and therefore the surface of the channel inherently forms the "web" through the rotor, of which would support a rotor reaction part (reference numeral 315, figure 3).

For claim 7, Hannes and Muramoto et al. disclose the claimed invention except for the barrier being a dirt guide device. The barrier of Mizuyama et al. (reference

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numeral 12) can be considered to be the dirt guide device, and it would have been obvious to include this for the purpose of protecting against foreign matter.

For claim 8, Hannes and Muramoto et al. disclose the claimed invention except for barrier including a baffle wall disposed in the air inlet for deflecting foreign matter. The barrier as disclosed by Mizuyama et al. (reference numeral 12) can be considered to include a baffle wall disposed on the side of the rotor, i.e. disposed in the air inlet for deflecting foreign matter (see figure 3), and it would have been obvious to include this for the purpose of protecting against foreign matter.

For claim 9, Hannes discloses a jacket (reference numeral 311, figure 3), and when applied between the wheels of the wheel set of Muramoto et al., this would constitute a continuous jacket for the wheel set shaft.

For claim 15, Hannes discloses the baffle wall having a slanted configuration (see figure 3).

4. Claims 6, 10-12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes, Muramoto et al., and Mizuyama et al. as applied to claim 4 above, and further in view of Hellmund (US Patent No.: 1238292).

For claim 6, Hannes, Muramoto et al., and Mizuyama et al. disclose the claimed invention except for the barrier including the catch device for preventing foreign matter from impacting the wheel set shaft, with the catch device having a first section forming part of the fan. Hellmund discloses a similar configuration for the catch device (reference numeral 16, figure 1) which is part of the fan (reference numeral 10), and it

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would have been obvious to have this feature since Hellmund uses this for a machine having ventilation means and prevention of foreign substances from entering the device (see page 1, lines 10-21), the same technological field as the claimed invention, and a person of ordinary skill would have applied this for the purpose of protecting the wheel set shaft.

For claim 10, Hannes, Muramoto et al., and Mizuyama et al. disclose the claimed invention above except for the rotor having a dirt-binding surface. Hellmund discloses a surface (reference numeral 16) that can be considered a dirt-binding surface, and it would have been obvious to have this feature since the invention of Hellmund is related to ventilation means, the same technological field as the claimed invention, and a person of ordinary skill would have applied this for the purpose of preventing dirt from further damaging the device.

For claim 11, Hannes, Muramoto et al., and Mizuyama et al. disclose the claimed invention except for the catch device having a second section in closed proximity of the air inlet. Hellmund discloses a similar catch device as explained for claim 6 above, and it would have been obvious to have it be in close proximity of the air inlet since this would serve the purpose of preventing dirt from further damaging the device.

For claim 12, Hannes discloses a cooling channel (reference numeral 37), but does not specifically teach the cooling channel having an inside wall formed with a dirt-binding surface. Hellmund discloses a dirt-binding surface as explained for claim 10 above, and it would have been obvious to apply this configuration for the cooling channel for the purpose of preventing dirt from damaging the device.

For claim 16, Hannes, Muramoto et al., and Mizuyama et al. disclose the claimed invention except for the first and second sections of the catch device having an inwardly turned nose. Hellmund discloses a similar catch device with an inwardly turned nose (see figure 1), and it would have been obvious to include this feature since this would provide further protection from dirt damaging the device.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes, Muramoto et al., Mizuyama et al., and Hellmund as applied to claim 10 above, and further in view of Schneider (German Patent Document No.: DE 4427760 A1).

For claim 13, the inventions of Hannes, Muramoto et al., Mizuyama et al. and Hellmund disclose the claimed invention, but do not specifically teach the surface being sticky. Schneider discloses a motor with a rotor having a sticky layer on its surface (see the English Abstract). It would have been obvious to apply the teachings of Schneider and modify the references of Hannes, Muramoto et al., Mizuyama et al. and Hellmund so that the dirt-binding surface would be sticky for the purpose of further protecting the device from damage.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 2, 4-13, 15 and 16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX W. MOK whose telephone number is (571)272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/  
Supervisory Patent Examiner, Art Unit 2834

/A. W. M./  
Examiner, Art Unit 2834